

The tea tree *Leptospermum firmum* (Schau.) Benth. was collected at Bayswater near Perth in 1901 but is otherwise known only from the south coast between Busselton and Albany. Strangely, the Gingin plants are much taller than those of the south, being up to 8 m tall with a stout trunk and rough, fissured bark, instead of a shrub of 2-3 m.

Twining Bladderwort, *Utricularia volubilis* R. Br., has been seldom collected but its main range is the south coast, in wet swamps between Pemberton and Albany. It grows on peaty banks in flowing water. Other outlying populations are at Bayswater and Esperance.

It is possible that these species were once more widespread when the climate was wetter and that increasing dryness has forced them to retreat to the extreme south west except for populations which can survive in such favoured localities as the Gingin Brook. Similarly the *Cyclosorus* may have survived from a time when wetter conditions provided a link up the west coast to tropical Australia.

An exciting find near the source of the Brook, though in the adjacent jarrah-banksia woodland rather than along the Brook itself, was the legume *Ptychosema pusillum* Benth. A herb only a few cm tall with small pinnate leaves, it has long-stalked red-brown and yellow flowers resembling those of the Lamb Poison, *Isotropis cuiseifolia* (Sm.) Domin. Previously it was unrepresented at the W.A. Herbarium, and apart from an old collection in the State Herbarium of South Australia had not been seen since Drummond collected it in the 1840's.

Aquatic plants which are common in the Brook include the floating fern *Azolla filiculoides* Lam., Water Starwort *Callitriche stagnalis* Scop., Water Buttons *Cotula coronopifolia* L. and Water Ribbon *Triglochin procerum* R.Br.

In the summer of 1970-71 a bushfire occurred near the source of the Brook and resulted in the flowering in 1971 of several species in which flowering is usually suppressed by the dense swamp vegetation. One was the Pink Bunny Orchid, *Eriochilus scaber* Lindl., here the late-flowering (October) form which is less hirsute than the typical, winter-flowering form. Others were an unidentified *Lagenifera*, much smaller than the common *L. stipitata* (Labill.) Druce, and a tiny yellow-flowered *Goodenia*, also as yet unidentified.

Finally, mention should be made of the unexpected find of a tree fern, *Cyathea cooperi* (Hook. ex F. Muell.) Domin, of which there are 20-30 plants along 1½ miles of the Brook. They vary in size, the largest having trunks 3 m tall. The species is native to Queensland and New South Wales and must have been introduced here some years ago, though the local farmers cannot suggest its origin. The presence of the common fig, *Ficus carica* L., and some naturalised roses (*Rosa ?canina* L.) further downstream, indicates that they are garden escapes. That this fern is able to establish itself under suitable conditions in this State is shown by its occurrence at Bedfordale near Armadale where it has spread along 2 miles of Nerrigen Brook from a single specimen planted in 1934. (This was recorded by Smith, *W. Austral. Nat.*, 9 (4), 1964: 93 as *Cyathea australis* (R.Br.) Domin). Less easily explained is a solitary *Cyathea cooperi* growing in Karri forest about 30 miles west of Manjimup—possibly the chance survival of a wind-blown spore is the answer.

THE STICK-NEST RAT, *LEPORILLUS CONDITOR*, IN THE GIBSON DESERT

By STAN GRATTE, Geraldton

In August, 1970 a party of members of the Geraldton Historical Society, including myself, went to the lower Gibson Desert area in search of relics left at Blyth Pool by John Forrest in 1874.

We located two mammal nests which very greatly intrigued us and they were eventually proved to be the nests of the Stick-nest Rat, *Leporillus conditor*. The first nest was very old and partly demolished,

possibly by Aborigines or dingoes, but this enabled us to inspect its interior. The site was in a gorge opening eastward, in a range of hills between Forrest's "Remarkable Hill" and Blyth Pool (Lat. 26° 03' S., Long. 125° 28' E., about 70 miles WNW of the Warburton Mission). The second nest had very recently been used and was situated about 40 miles to the north of Blyth Pool, at Mt. Beadell on the Gunbarrel Highway.

Both nests were in caves. The second cave was about 15ft. long, 3ft. 6in. deep and faced north. The nest, against the back wall of the cave, was cone-shaped, 3ft. high and 5ft. through the base. It was built of flat stones, of matchbox size, which had dropped from the roof. These were bound together by sticks and a peculiar gummy substance. The sticks had been attacked by termites, this helping to weld the stones into a solid mass, which seemingly would be impregnable to enemies, such as dingoes. The gum is often found in caves in the inland and has been attributed to bats.

On the left side of both nests was an entrance burrow starting about 1ft. in diameter and diminishing rapidly to about 4in., leading to the rear of the nest. In the partly destroyed nest near Blyth Pool this burrow led to a small chamber lined with a very fine grass nesting material. This grass grew near both nests.

Droppings were found near the Mt. Beadell nest. These were like kangaroo droppings but a quarter-of-an-inch in diameter. Others resembled domestic rat droppings. Both appeared to contain vegetable matter.

Both nests had some features in common. They were situated in caves, although the caves faced different directions (one north, the other south). The caves were in loose, shaly rock and this would ensure a ready supply of building material for the nests. In both cases what appeared to be echidna diggings were found within a few yards of the nest.

The Mt. Beadell nest is easily located. It is situated on the brow of a hill about 800 yards due east of the Mt. Beadell trigonometrical cairn (NMF 20).

My endeavours to find out more about this curious nest led me to Mr. Peter Muir of Leonora, a highly experienced bushman. He had this to say: "I have seen several of these nests and give details of one situated at the 462 miles rockhole, about one mile east of the Vermin Proof Fence, west of the Canning Stock Route. It was also in a small cave site in a large expanse of hard and low breakaway. Believing the nest was not used I deposited a quantity of equipment in the cave and covered it with a tarpaulin. I returned several weeks later and found a Stick-nest Rat had used the tarpaulin as a home. I was able to capture him alive. He was the size of a small cat, of a rich pleasant brownish colour, with very attractive and fairly large eyes. His tail was about 9in. long, of a good size with a very pronounced ridge along the top. The hind legs were longer than the front ones, and the head was much wider than that in ordinary house rats. All in all he was a pretty little rodent indeed."

Dr. W. D. L. Ride, Director of the Western Australian Museum, has informed me he has found similar nests in the vicinity of Point Read and Sharpes Bluff, which are south of the road between Warburton Range and Cosmo Newbery, north and north west of Neale Junction, and east of Yamarna Station. He has attributed these to *Leporillus* (in *Ann. Rep. W.A. Museum 1967-68*, pp. 49-50; and in his *Guide to the Native Mammals of Australia*, 1970, p. 143). The reasons for this attribution were: (1) that droppings and teeth marks were certainly those of a murid; (2) F. Wood Jones (in *The Mammals of South Australia*, 1925, p. 333) mentioned *Leporillus* dwelling in clefts between boulders; and (3) E. Troughton (in *Rec. Aust. Mus.*, 14, 1923, p. 30) mentioned that nests made west of Ooldea "had small stones placed among and on top of sticks for added security." Moreover, both authors mentioned considerable variation in the form of nests.